

# Field of Degree and Occupational Outcome of Foreign-Born Workers in the U.S.

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## Research Questions

- Are foreign-born workers less likely to be in occupations that match their field of study?
- How does occupational distribution vary by field of degree (FOD), nativity, and foreign-born region of birth?

## Data

- This analysis uses data from the 2009 American Community Survey (ACS):
  - Annual survey of approximately 3 million household addresses
  - Most current estimates of detailed social, housing, economic, and demographic data for geographic areas across the United States
  - Results compiled on a monthly basis and published annually

- It also uses a crosswalk between the 2000 Classification of Instructional Programs (CIP) and the 2000 Standard Occupational Classification (SOC) developed by the National Crosswalk Service Center (NCSC)

## Universe

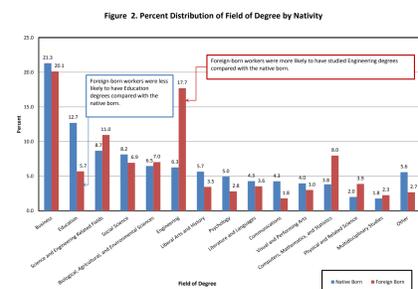
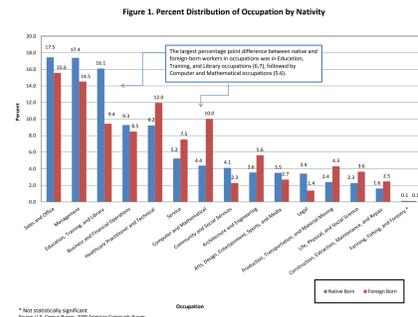
The universe consists of civilian employed population 25 years and older with **at least a bachelor's degree** who reported working within the 12 months prior to interview.

## Definitions and Concepts

- Who are foreign-born workers?
  - Workers who indicated they were **not** born in the United States, **not** born in Puerto Rico, Guam, the U.S. Virgin Islands, or the Northern Marianas, and were **not** born abroad of American parent(s)
- What is field of degree (FOD)?
  - Persons with a bachelor's degree or higher were asked to list the specific major(s) of any **bachelor's degree** received
  - Used to assess the qualifications of the U.S. college-educated workforce
  - First appeared on the ACS in 2009
  - This analysis uses the detailed FOD for the first major listed by respondent

- What is occupation?
  - Describes the kind of work a person does on the job
  - For employed people, the data refer to the person's job during the previous week
  - For those who worked two or more jobs, the data refer to the job where the person worked the greatest number of hours
  - For unemployed people and people who are not currently employed but report having a job within the last five years, the data refer to their last job

## Examination of proportion of workers by nativity



Note: All differences by nativity are statistically significant. Source: U.S. Census Bureau, 2009 American Community Survey.

## Are foreign-born workers less likely to be in occupations that match their FOD?

- We constructed a binary variable from the NCSC's crosswalk between the CIP and the SOC, representing whether or not the person's occupation is related to the bachelor's FOD.

	Total	Percent	Non-related Occupation	Percent	Related Occupation	Percent
Civilian Employed Population 25 years old and over with at least a Bachelor's degree						
Total	41,478,000	100.0	22,385,000	54.0	19,093,000	46.0
Native Born	35,117,000	84.7	19,857,000	53.7	16,260,000	46.3
Foreign Born	6,362,000	15.3	3,528,000	55.5	2,833,000	44.5

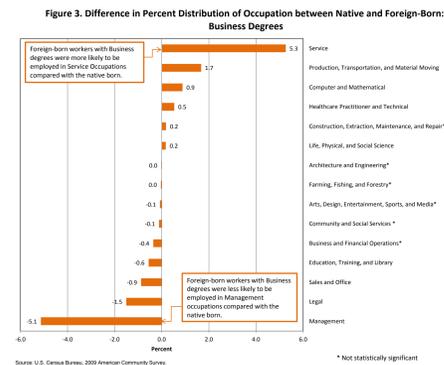
Note: U.S. Census Bureau, 2009 American Community Survey, National Crosswalk Service Center, 2003 Classification of Instructional Programs (CIP) and the 2000 Standard Occupational Classification (SOC) Crosswalk.

Table 2. Percent in Related Occupations by Field of Degree and Nativity

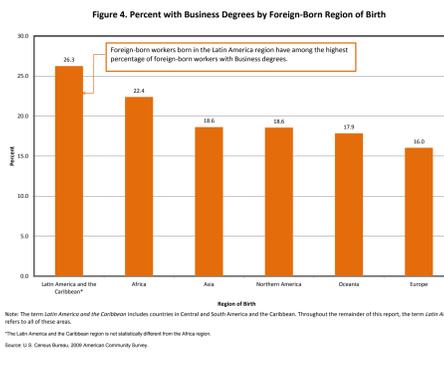
FOD	Native Born	Foreign Born
Computers, Mathematics, and Statistics	42.9	52.3
Biological, Agricultural, and Environmental Sciences	24.3	26.4
Physical and Related Science	23.4	27.9
Psychology	13.0	12.4
Social Science	8.1	10.3
Engineering	44.2	38.6
Multidisciplinary Studies*	15.6	15.1
Science and Engineering Related Fields	73.1	73.0
Business	79.9	74.0
Education	87.0	42.4
Literature and Languages	15.3	16.8
Liberal Arts and History	14.9	17.9
Visual and Performing Arts*	31.2	33.3
Communications*	21.2	19.3
Other	52.5	49.1

\* Not statistically significant. Source: U.S. Census Bureau, 2009 American Community Survey, National Crosswalk Service Center, 2003 Classification of Instructional Programs (CIP) and the 2000 Standard Occupational Classification (SOC).

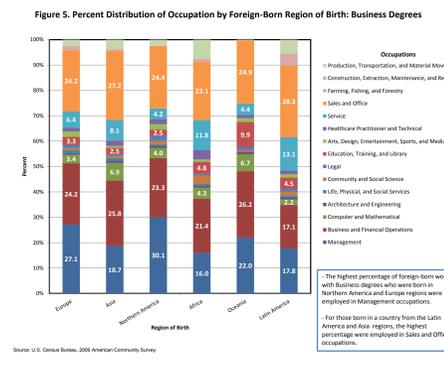
## How does occupational distribution vary by FOD, nativity, and foreign-born region of birth?



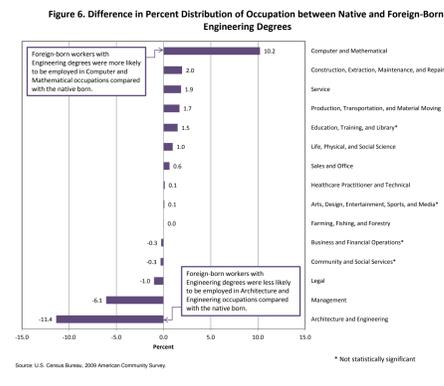
Note: U.S. Census Bureau, 2009 American Community Survey. \* Not statistically significant.



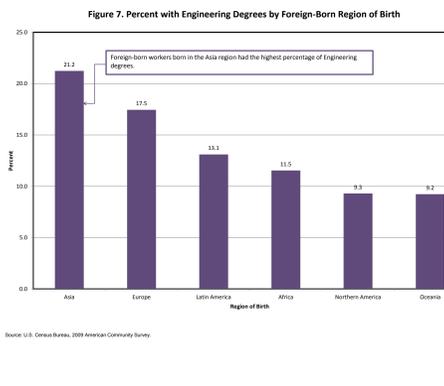
Note: The term Latin America and the Caribbean includes countries in Central and South America and the Caribbean. Throughout the remainder of this report, the term Latin America refers to all of those areas. \* The Latin America and the Caribbean region is not statistically different from the Africa region. Source: U.S. Census Bureau, 2009 American Community Survey.



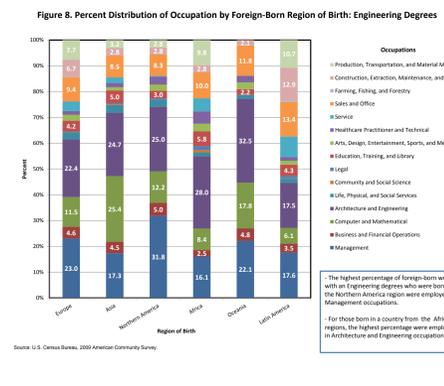
Note: For those born in a country from the Latin America and Asia regions, the highest percentage were employed in Sales and Office occupations. Source: U.S. Census Bureau, 2009 American Community Survey.



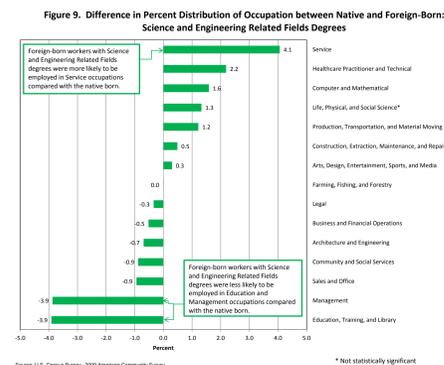
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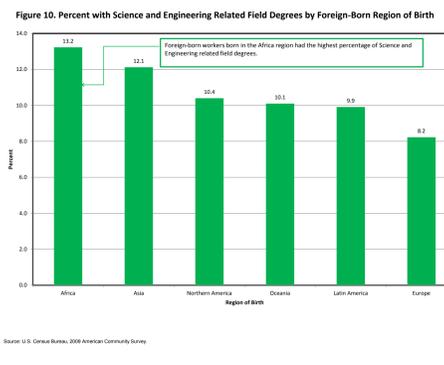
Note: U.S. Census Bureau, 2009 American Community Survey.



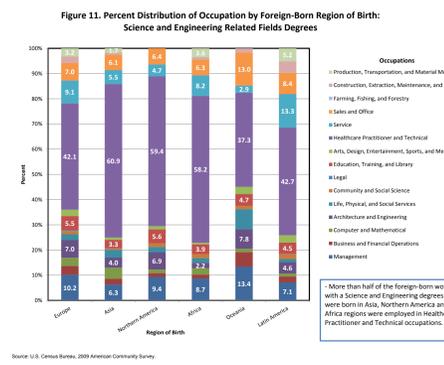
Note: For those born in a country from the Africa region, the highest percentage were employed in Architecture and Engineering occupations. Source: U.S. Census Bureau, 2009 American Community Survey.



Note: U.S. Census Bureau, 2009 American Community Survey. \* Not statistically significant.



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## Conclusion

- Native-born workers are more likely to have an occupation related to their field of study than foreign-born workers.
- Foreign-born workers from Latin America are most likely to have a Business degree. Foreign-born workers from Oceania are least likely to have an Engineering degree.
- This study is among the first to examine the relationship between field of degree and occupation in foreign-born workers using the ACS. It makes way to analyze factors, such as year of entry, age, and English proficiency that might affect this relationship for this population.
- This type of analysis facilitates making public policy decisions about educational training backgrounds for specialized visas granted to foreign-born workers, based on the higher demand of certain occupations in the U.S. for high and low-skilled workers.
- It also helps in the development of programs targeted to foreign-born workers to assist them in obtaining jobs that match their educational training, such as English-language proficiency courses and training to obtain a U.S. license or certification related to their field of study.

## Limitations

- The FOD item is only asked to persons with a bachelor's degree or higher. Therefore, if a person has completed a master's or doctoral level degree, only the bachelor's degree information is captured. This could affect the field of degree-occupation match rates.
  - Answer question 12 if this person has a bachelor's degree or higher. Otherwise, SKIP to question 13.
- This question focuses on this person's BACHELOR'S DEGREE. Please print below the specific major(s) of any BACHELOR'S DEGREES this person has received. (For example: chemical engineering, elementary teacher education, organizational psychology)
- In the 2000 CIP-SOC Crosswalk, there may be no direct correspondence between a CIP code and a SOC code because:
  - The occupation does not require any postsecondary education
  - The CIP program is not career related
  - Insufficient number of institutions offer the program to justify having a CIP code

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For more information on the American Community Survey (ACS), see the following website:  
<http://www.census.gov/acs/www>

To get ACS data, access American FactFinder at: <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>